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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,875	03/28/2001	Joy A. Roberts	11333US04	3621

7590 11/24/2003

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EXAMINER
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RUTHKOSKY, MARK

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/819,875

Applicant(s)

ROBERTS ET AL.

Examiner

Mark Ruthkosky

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 12-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

The application is a continuation-in-part of US application 09/406,318, now US patent 6,479,177, filed 9/27/1999.

### ***Information Disclosure Statement***

The information disclosure statements filed 6/18/2001 and 9/24/2001 have been placed in the application file, and the information referred to therein has been considered as to the merits.

### ***Drawings***

The drawings filed on 3/28/2001 have been approved.

### ***Election/Restriction***

Applicant's election with traverse of claims 12-20 and 22 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the claims are sufficiently related in technical subject matter. This is not found persuasive because the applicant has not provided arguments that the inventions have the same modes of operation, the same functions and the same effects. The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-16, 19-20 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Voss et al. (US 6,106,964.)

The instant claims are to an electric power generation system comprising (a) a fuel cell stack connectable to an external electrical circuit for supplying electrical current to the circuit, said stack comprising at least one solid polymer fuel cell and reactant stream passages for directing reactant streams through the fuel cell; (b) a humidifier in fluid communication with at least one of said reactant stream passages for humidifying a reactant stream supplied to the fuel cell stack; and (c) a humidifier bypass system comprising at least one bypass conduit for directing the reactant stream to the stack in fluid isolation from the humidifier and a bypass control device for selectively directing flow of the reactant stream to the fuel cell stack through either of the humidifier and the humidifier bypass conduit.

Voss et al. (US 6,106,964) teaches a solid polymer fuel cell stack comprising (a) a fuel cell stack connectable to an external electrical circuit for supplying electrical current to the

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circuit, said stack comprising at least one solid polymer fuel cell and reactant stream passages for directing reactant streams through the fuel cell; (b) a humidifier in fluid communication with at least one of said reactant stream passages for humidifying a reactant stream supplied to the fuel cell stack; and (c) a humidifier bypass system comprising at least one bypass conduit for directing the reactant stream to the stack in fluid isolation from the humidifier and a bypass control device for selectively directing flow of the reactant stream to the fuel cell stack through either of the humidifier and the humidifier bypass conduit (see figure 1 and col. 9, lines 15-45.) The reactant may be an oxidant or fuel source (claim 4.)

Claim 15 is to a control device operable such that the reactant fluid is directed to the humidifier while electrical power is generated by the stack and to the bypass after current from the stack has been interrupted. As the claim states that the device is operable, the valve of the invention is considered operable in such a manner that the fluid can be directed to either the humidifier or the bypass while power is generated and when the supply to an external circuit is interrupted. The system bypass may be used prior to shutdown in order to purge the stack with a dry gas. The valve is shown to switch from the humidifier to the bypass and back in the reference. Thus, the claims are anticipated.

Claims 12-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Koseki et al. (JP 405047394.)

Koseki et al. (JP 405047394) teaches a solid polymer fuel cell stack comprising (a) a fuel cell stack connectable to an external electrical circuit for supplying electrical current to the circuit, said stack comprising at least one solid polymer fuel cell and reactant stream passages for directing reactant streams through the fuel cell; (b) a humidifier in fluid communication with at

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least one of said reactant stream passages for humidifying a reactant stream supplied to the fuel cell stack; and (c) a humidifier bypass system comprising at least one bypass conduit for directing the reactant stream to the stack in fluid isolation from the humidifier and a bypass control device for selectively directing flow of the reactant stream to the fuel cell stack through either of the humidifier and the humidifier bypass conduit (abstract, figures 1-4.) Claim 15 is to a control device operable such that the reactant fluid is directed to the humidifier while electrical power is generated by the stack and to the bypass after current from the stack has been interrupted. As the claim states that the device is operable, the valve of the invention is considered operable in such a manner that the fluid can be directed to either the humidifier or the bypass while power is generated and when the supply to an external circuit is interrupted. The valve is shown to switch from the humidifier to the bypass and back in the reference. A microprocessor controller receives a voltage output signal that determines the opening and closing of the valve by the controller. Thus, the claims are anticipated.

### ***Examiner Correspondence***

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 703-305-0587. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:00.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be

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reached at 703-308-2383. The fax phone number for the organization where this application is assigned is 703-872-9306.

Mark Ruthkosky

Primary Patent Examiner

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*Mark Ruthkosky*  
11/16/03